REMARKS

Claims 1-4 and 18-22 are pending. Claims 2,3 and 18-22 have been cancelled. Claims 23-25 have been added. Applicants respectfully request reconsideration of the claims of the application as amended in view of the following remarks.

Rejection Under 35 U.S.C. §112

Claims 1-4 and 18-22 were rejected under 35 U.S.C. § 112, first paragraph as not being adequately described. The Examiner was concerned that new matter was added by the phrase "as a stand-alone-peptide irrespective of its activity as part of a receptor." Claims 2,3 and 18-22 were cancelled thus rendering the objection moot as to these claims. Applicants have amended Claim 1 to remove this phrase. Two additional steps were added. Support for the new "synthesizing a peptide ..." limitation can be found on page 11, lines 9-10; page 12 lines 8-10 and page 13, lines 19-21 of the specification. Support for the new "testing said peptide ..." limitation can be found on page 11 lines 12-23, pages 12-13 and page 14, lines 2-14. of the specification. Applicants respectfully submit that the claims are now compliant with the §112, ¶1 written description requirement.

Rejections Under 35 U.S.C. §103(a)

Claims 1-4 and 18-22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over United States Patent No. 6,333,034, hereinafter *Olsson*, in view of *Naranda et. al.*, hereinafter *Naranda*. Claims 2,3 and 18-22 have been cancelled rendering this objection moot with respect to these claims. Applicant has amended claim 1 and traverses any assertion that Claim 1 or Claims 23-25 are unpatentable over these references.

It is Examiner's assertion that *Olsson* teaches "receptor variants having activation sequence, and differ in size as compared to a known receptor sequence of interest (see col. 12, lines 57-67, and col. 13, lines 1-48, col. 23 lines 34-64)." It is respectfully submitted that this is taught nowhere in the *Olsson* reference. *Olsson* nowhere teaches the

comparison of two receptor variants to identify a missing or deleted region by their cDNA's as required by Claim 1. *Olsson* teaches that "activation sequences" are identified by their homology to MHC Class I antigens.

> The activation sequences are initially identified by homology to the sequence of an α_1-domain of an MHC Class I antigen. .... Thus, oligopeptides with sequence similarity to these regions are preferred.
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> (Col. 9, l. 44 - Col. 10, l. 42.)

Thus, any bioactivity disclosed by *Olsson* is limited to peptides with sequence homology to MHC-I. Similary, the peptides in *Naranda* were identified through their homology to MHC Class I antigens. (p. 11693, col 2 to p.11694, col. 1). Nowhere in *Olssen* or *Naranda* are peptides identified by comparing the cDNA's of receptor variants as in the present invention. In addition, nowhere taught in *Olssen* or *Naranda* is the "testing said peptide for activity as an antagonist to the ligand for the receptor or to the cell which expresses the receptor of the ligand" limitation that was added by amendment. Since these references do not disclose these limitations, this obviousness rejection must fail.

Neither *Olssen* and *Naranda*, alone or in combination, fairly teach, disclose or suggest the present invention. Nor is there any motivation to combine *Olssen* and *Naranda.* The law requires that there be some teaching, suggestion, or motivation to combine *Olsson* with *Naranda*. *In re Rouffet*, 47 USPQ 2d, 1453, 1456 (Fed. Cir. 1998). Otherwise, the Examiner is impermissibly engaging in hindsight to evaluate the invention:

> If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements, would permit an Examiner to use the claimed invention as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. Such an approach would be "an illogical and inappropriate process by which to determine patentability."
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> (*In re Rouffet*, 47 USPQ 2d, 1457, quoting *Sensonics, Inc. v. Aerosonic Corp.*, 38 USPQ 2d, 1551, 1554 (Fed. Cir. 1996).

To prevent the use of hindsight based on the invention, the law requires the Examiner to show a motivation to combine the references. The Examiner has failed to do so however. This is because the requisite motivation to combine the references in the prior art is not present. This requirement is not easily satisfied. In the case of *In re Anita Dembiczak and Benson Zinbarg,* 50 USPQ 2d, 1614 (Fed. Cir. 1999), the CAFC has indicated that the requirements for showing the teaching or motivation to combine references is "rigorous." *Dembiczak* at 1617. Moreover, this showing, which is rigorously required, must be "clear and particular." *Dembiczak* at 1617. See also, *C.R. Bard v. M3 Sys., Inc.*, 48 USPQ 2d, 1225, 1232 (Fed. Cir. 1998). It is well established that merely because references can be combined, the mere suitability for logical combination does not provide motivation for the combination. See, *Berghauser v. Dann,* Comr. Pats., 204 USPQ 393 (DCDC 1978); *ACS Hospital Systems, Inc., v. Montefiore Hospital*, 221 USPQ 929 (Fed. Cir. 1984). Mere conclusory statements supporting the proposed combination, standing alone, are not "evidence." *McElmurry v. Arkansas Power & Light Co.,* 27 USPQ 2d, 1129, 1131 (Fed. Cir. 1993) (Emphasis added).

This appears to be the exact situation here. Only a conclusory statement has been offered. There certainly has not been any clear and particular showing of the necessary suggestion in the prior art to combine the references. Such a conclusory statement suggests that the applicant's own claims have been impermissibly used as a template to reconstruct the rejection.

The Federal Circuit had stated over and over again, hindsight must not be used to construct a rejection.

> The combination of elements from non-analogous sources, in the manner that reconstructs the applicants invention only with the benefit of hindsight, is insufficient to present a prima facie case of obviousness. There must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination. That knowledge cannot come from applicants invention itself.
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> *In re Oetiker*, 24 USPQ 2d, 1443, 1446 (Fed. Cir. 1992).

The Examiner asserts that *Naranda* states "'recognition of specific sequence on insulin receptor suggests ligand-dependant IR internalization and its mechanism affecting endocytosis' (see page 11695, column 2, paragraph 7)." First, Applicant cannot find this quote anywhere in *Naranda*.. Second, the only express motivation provided by *Naranda* and *Olsson* is identifying receptor-specific sites of importance ***as evidenced by their homology to MHC-1***. Indeed, these references teach away from the instant invention because an ordinary practitioner would only have been motivated to analyze peptides that had significant homology to MHC-1, not any peptide sequence that may be a part of the receptor.

It is respectfully submitted that the rejection of the claims cannot be maintained over the references, as none of the references teach or suggest the subject matter of these claims.

Applicant submits that the claims are now in condition for allowance, and respectfully request a notice to that effect. If the Examiner believes any further discussion will advance the prosecution of the application, she is highly encouraged to telephone Applicant's attorney at the number given below.

A check in the amount of $205.00 is enclosed to cover the Petition fee of $205.00. If necessary, please charge any additional fees or credit any overpayments as a result of the filing of this paper to our Deposit Account No. 02-3978.

Respectfully submitted,

KENJI SAKAMOTO

By _____
Thomas W. Cunningham
Reg. No. 48,722
Attorney/Agent for Applicant

Date: ***August 18, 2002***

BROOKS & KUSHMAN P.C.
1000 Town Center, 22nd Floor
Southfield, MI 48075
Phone: 248-358-4400
Fax: 248-358-3351